that is undergoing or that has undergone interventional therapy. The method comprises the steps of:

(a) administering to a patient a contrast agent capable of binding to a targeted tissue or tissue component that is undergoing or that has undergone interventional therapy;

(b) subjecting the patient to one of MRI, ultraviolet light, visible light or infrared light imaging; and

(c) monitoring an imaging signal characteristic of the contrast agent to determine whether the interventional therapy is complete.

The contrast agents used in the present invention comprise an image-enhancing (or signal generating) moiety ("IEM") and a state-dependent tissue binding moiety ("SDTBM"). These contrast agents are capable of demonstrating state-dependent binding to a targeted tissue or tissue component. Such binding leads to a detectable change in the signal characteristics of the contrast agent and thus, permits the determination of state changes within a targeted tissue (e.g., ablation, degradation, or denaturation) that is undergoing or that has undergone interventional therapy.

In one aspect of this invention, the use of the contrast agents allow for "real-time" monitoring during thermal interventional therapy of thermally-induced necrosis. These contrast agents exhibit increased contrast between tissues of different states.

Brief Descriptions of the Drawings

FIG.1 is a graph demonstrating the Plasma Concentration (mM) of Gd-DTPA over time after tail vein injection in two rats.

contrast agent to rats, rabbits, or higher mammals. It has been observed that blood half-life extension is greater in rabbits and higher mammals than in rats. In this application, blood half-life data, as measured by AUC-conc., represents experimentation in rats. The error associated with this data is approximately +/- 10%.

The reason that a half-life measurement itself is not used is that the mathematical definition of this quantity is often not clear and the resulting estimates are variable depending on the pharmacokinetic model used and the length of time the blood samples were obtained.

For example, the average plasma concentrations observed after tail vein injection of 0.1 mmol/kg of Gd^{153}-labeled Gd-DTPA in two rats is shown in FIG. 1. Using the Macintosh program KaleidaGraph, this AUC-conc. from 0 to 10 minutes was calculated as 3.5 mM min.

The contrast agents of this invention, useful in targeting serum proteins such as HSA, exhibit an AUC-conc. increase of at least 20% when the BHEM is added to the IEM